System Life Cycle Overview

The CMS IT Investment Management Process and the Roadmap cover the entire system life cycle, which is the period of time that begins when a system is conceived and ends when the system is no longer available for use.

For a graphical representation of the CMS System Life Cycle, see System Life Cycle Overview Graphic.

Legislative and Business Drivers:

The CMS IT Investment Management Process and the Roadmap are driven by the Government Performance and Results Act (GPRA) of 1993, the Paperwork Reduction Act of 1995, the Clinger-Cohen Act (formerly the Information Technology Management Reform Act (ITMRA) of 1996, and the Government Information Security Reform Act (GISRA) of 2000.

For more information regarding these legislative drivers, reference the Overview section of the IT Investment Management Process Guide.

In July 2000, the CMS IT Council also adopted the IEEE/EIA 12207 as the standard to be followed for the CMS System Development Life Cycle (SDLC). As a result, the contents of the Roadmap are based on the IEEE/EIA 12207 standard. Any customization or deviation from the standard is appropriately noted within the Roadmap.

Lifecycle Phases:

The CMS IT Investment Management Process consists of three primary phases: Business Case Analysis Phase, IT Investment Management Phase, and Post-Implementation Review & Assessment Phase. Each of these three primary phases is further partitioned into additional subordinate phases.

The Business Case Analysis Phase is comprised of one sub-phase called the Investment Analysis Phase.

The IT Investment Management Phase is comprised of seven sub-phases, which are the Acquisition Phase, Requirements Analysis Phase, Design & Engineering Phase, Development Phase, Testing Phase, Implementation Phase, and the initial part of the Operations & Maintenance Phase.

The Post-Implementation Review & Assessment Phase is comprised of the later part of the Operations & Maintenance Phase, as well as the Retirement Phase.

For more detailed information regarding the individual activities that are performed during each of these phases, including deliverables that are initiated and completed and major review checkpoints which must be passed during the phases, see Lifecycle Phases.

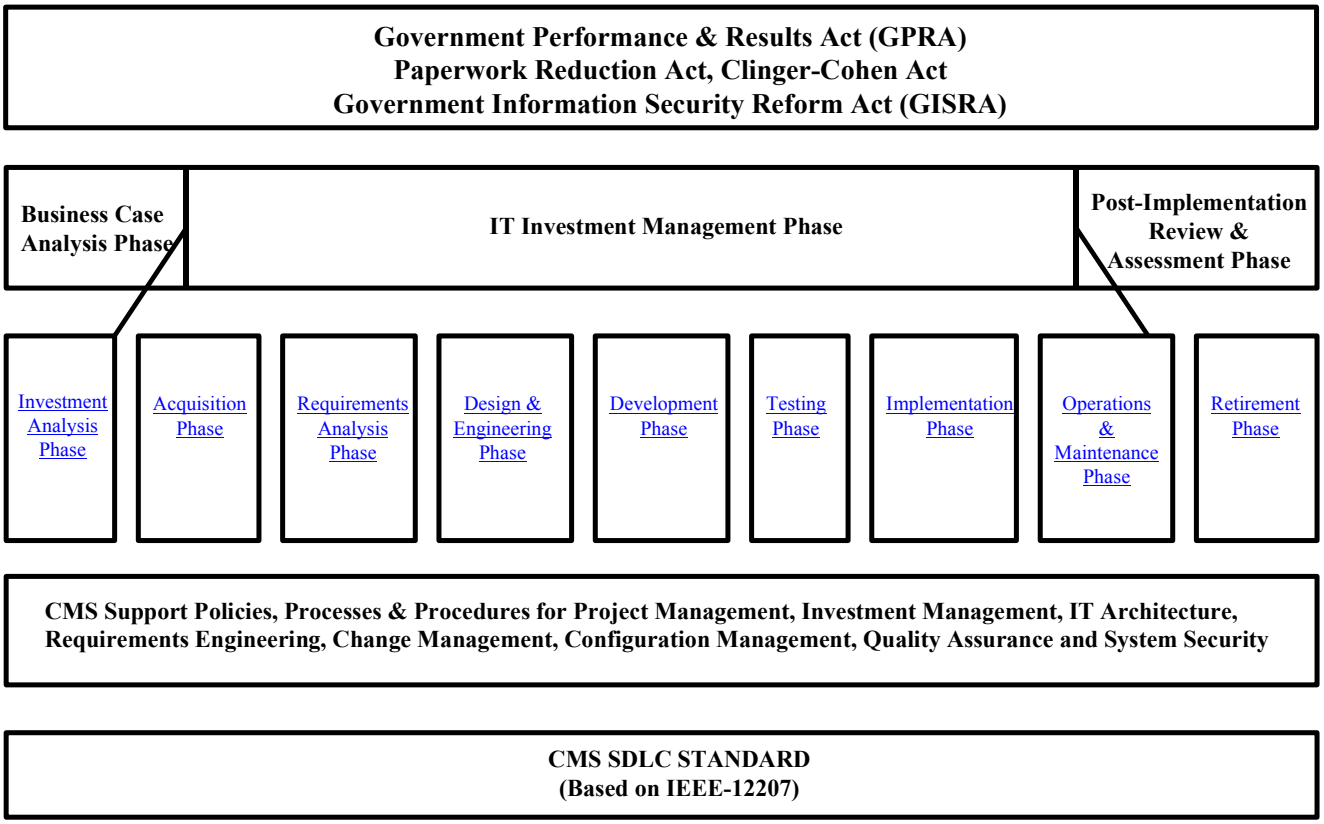
Support Policies, Processes and Procedures:

To support the proper engineering and implementation of the system life cycle at CMS, several policies, processes and procedures have been established covering such topics as project management, investment management, IT architecture, requirements engineering, change management, configuration management, quality assurance, and system security.

For a complete list and more detailed information regarding individual CMS IT policies, see Policies.

For more information on established CMS IT processes and procedures, see Processes.

CMS Integrated IT Investment Management Roadmap
System Life Cycle Overview



System Lifecycle Work Breakdown Structure (WBS)

A Work Breakdown Structure (WBS) is a decomposition of the planned work effort into specific phases, tasks, activities, milestones and deliverables necessary to accomplish project objectives. A WBS is a task-oriented or deliverable-oriented grouping of identified elements or components of a project, which organizes and defines the total scope of the project. A WBS follows an outline structure where each descending level represents an increasingly detailed definition of a project component. Project components may be products or services. There are no time, cost, or resource assignments associated with a WBS.

The following is the current high-level, task-oriented WBS that has been defined to date in the Roadmap for the full system life cycle. As such, this WBS is notably incomplete. Only those activities that are associated with the Investment and Project Management Level processes and deliverables that have been defined thus far for the Roadmap are included in this WBS. As the Roadmap content continues to evolve, so too will this WBS.

The CMS IT Investment Management Process consists of three primary phases: Business Case Analysis Phase, IT Investment Management Phase, and Post-Implementation Review & Assessment Phase. Each of these three primary phases is further partitioned into additional subordinate phases. Each subordinate phase is then further partitioned into a series of primary tasks and activities that occur during that phase. Some activities are mandatory for all projects, while other activities are only conditionally mandatory and therefore may not be necessary for a specific project to address.

Project Owners/Managers should utilize this WBS as a starting point for developing a detailed schedule for their project that includes all of the mandatory tasks and other appropriate activities identified below that are applicable to the project.

1.0 Business Case Analysis Phase

- 1.1 Investment Analysis Phase
  - 1.1.1 Prepare IT Fact Sheet
  - 1.1.2 Perform FMIB Review to Approve Seed Money for BCA
  - 1.1.3 Establish Business Case Analysis (BCA) Support Team
  - 1.1.4 Prepare Business Case Analysis (BCA) Statement of Work (SOW) / HHS-393 Form
  - 1.1.5 Perform Review of BCA SOW/393
  - 1.1.6 Develop Business Case Analysis (BCA)
  - 1.1.7 Perform Review of Business Case Analysis (BCA)
  - 1.1.8 Perform FMIB Briefing & Review to Approve Funding to Proceed

2.0 IT Investment Management Phase

- 2.1 Acquisition Phase
  - 2.1.1 Update IT Fact Sheet
  - 2.1.2 Prepare Initial Exhibit 300
  - 2.1.3 Perform Initial Department/OMB Clearance
  - 2.1.4 Perform PRCP Review for Ongoing Project Implementation Support
  - 2.1.5 Initiate New System of Records (SOR)
  - 2.1.6 Prepare System Development Life Cycle (SDLC) Statement of Work (SOW) / HHS-393 Form
  - 2.1.7 Perform Review of SDLC SOW/393
  - 2.1.8 Perform Proposal Review & Award
  - 2.1.9 Prepare Data Use Agreement (DUA)
  - 2.1.10 Perform Review of Data Use Agreement (DUA)

2.2 Requirements Analysis Phase
- 2.2.1 Analyze User and System Requirements from Business Case Analysis (BCA)
- 2.2.2 Update IT Fact Sheet
- 2.2.3 Enhance System of Records (SOR)
- 2.2.4 Initiate New System Security Plan (SSP)

2.3 Design & Engineering Phase
- 2.3.1 Update IT Fact Sheet
- 2.3.2 Prepare Inputs for CIO Initial IT Architecture Review & Certification
- 2.3.3 Perform CIO Initial IT Architecture Review & Certification
- 2.3.4 Perform FMIB Funding Approval for the Development & Testing Phases
- 2.3.5 Prepare Final System of Records (SOR)
- 2.3.6 Perform Review of System of Records (SOR)
- 2.3.7 Prepare Computer Match Agreement (CMA)
- 2.3.8 Perform Review of Computer Match Agreement (CMA)
- 2.3.9 Prepare Inter/Intra-agency Agreement (IA)
- 2.3.10 Perform Review of Inter/Intra-agency Agreement (IA)
- 2.3.11 Enhance System Security Plan (SSP)

2.4 Development Phase
- 2.4.1 Update IT Fact Sheet
- 2.4.2 Prepare Inputs for CIO Final IT Architecture Review & Certification
- 2.4.3 Perform CIO Final IT Architecture Review & Certification
- 2.4.4 Enhance System Security Plan (SSP)
- 2.4.5 Perform FMIB Funding Approval for the Implementation Phase

2.5 Testing Phase
- 2.5.1 Update IT Fact Sheet
- 2.5.2 Prepare Final System Security Plan (SSP)
- 2.5.3 Perform Project Management Level Testing Activities

2.6 Implementation Phase
- 2.6.1 Update IT Fact Sheet
- 2.6.2 Perform System Security Plan (SSP) Certification
- 2.6.3 Perform System Security Plan (SSP) Accreditation
- 2.6.4 Prepare Implementation Readiness Review (IRR) Data Sheet
- 2.6.5 Perform Implementation Readiness Review (IRR)
- 2.6.6 Perform FMIB Funding Approval for the Operations & Maintenance Phase

2.7 Operations & Maintenance Phase
- 2.7.1 Update IT Fact Sheet

3.0 Post-Implementation Review & Assessment Phase

3.1 Operations & Maintenance Phase
- 3.1.1 Update IT Fact Sheet
- 3.1.2 Perform System Security Plan (SSP) Re-Certification
- 3.1.3 Perform System Security Plan (SSP) Re-Accreditation
- 3.1.4 Prepare Annual Exhibit 300
- 3.1.5 Perform Annual Department/OMB Clearance

3.2 Retirement Phase